

JANUARY / JANVIER

ARTICLES

- Sergio Casella, Anita Toffanin, Stefania Ciompi, Nora Rossi, and W.J. Payne** Metabolism of nitrogen oxides and hydroxylamine in cells of true denitrifiers and *Rhizobium "hedysari"* HCNT1 1
- John H. Andrews, Robin F. Harris, Russell N. Spear, Gee W. Lau, and Erik V. Nordheim** Morphogenesis and adhesion of *Aureobasidium pullulans* 6
- Andreas Prokop, Peter Rapp, and Fritz Wagner** Production, purification, and characterization of an extracellular endo- $\beta$ -1,3-glucanase from a monokaryon of *Schizophyllum commune* ATCC 38548 defective in exo- $\beta$ -1,3-glucanase formation 18
- J.A. Johnson and N.J. Whitney** Cytotoxicity and insecticidal activity of endophytic fungi from black spruce (*Picea mariana*) needles 24
- P.H. Goodwin and C.R. Sopher** Brown pigmentation of *Xanthomonas campestris* pv. *phaseoli* associated with homogenetic acid 28
- Srabani Banerjee, Judy Little, Maria Chan, Brian T. Luck, Colette Breuil, and David L. Brown** Production and characterization of monoclonal antibodies to the sapstaining fungus *Ophiostoma piceae* 35
- Oleg V. Fedorov, Michael G. Pyatibratov, Alla S. Kostyukova, Natalja K. Osina, and Valery Yu. Tarasov** Protofilament as a structural element of flagella of haloalkalophilic archaeobacteria 45
- Milena Sinigaglia, Rosalba Lanciotti, and Maria Elisabetta Guerzoni** Biochemical and physiological characteristics of *Yarrowia lipolytica* strains in relation to isolation source 54
- NOTES
- Deborah Berthelot, L.G. Leduc, and G.D. Ferroni** The absence of psychrophilic *Thiobacillus ferrooxidans* and acidophilic heterotrophic bacteria in cold, tailings effluents from a uranium mine 60
- Hans-W. Ackermann, Alain Reynaud, and Marie C. Gayerie** PID, a new member of the P1 bacteriophage group 63
- David M. Faguy, Ken F. Jarrell, John Kuzio, and Martin L. Kalmokoff** Molecular analysis of archaeal flagellins: similarity to the type IV pilin – transport superfamily widespread in bacteria 67
- Ana-Cristina Ferreira, Paula Vasconcellos Morais, and Milton S. da Costa** Alterations in total bacteria, iodonitrophenyltetrazolium (INT)-positive bacteria, and heterotrophic plate counts of bottled mineral water 72
- Jose Luis López-Ribot, Maria Novella Vespa, and W. LaJean Chaffin** Adherence of *Candida albicans* germ tubes to murine tissues in an ex vivo assay 77
- Instructions to Authors** ix
- Recommandations aux auteurs** xiii
- Research Journals Publication Policy** xvii
- Revues scientifiques politique de publication** xix

FEBRUARY / FÉVRIER

ARTICLES

- Lyle G. Whyte and William E. Inniss** Electroporation and its effect on the psychrotrophic bacterium *Bacillus psychrophilus* 83
- S.H. Smith, R.G.E. Murray, and M. Hall** The surface structure of *Leptotrichia buccalis* 90
- Mark W. Platt, Norberto Correa, Jr., and Carolyn Mold** Growth of group B streptococci in human serum leads to increased cell surface sialic acid and decreased activation of the alternative complement pathway 99
- Thomas Krarup, Lauritz W. Olson, and Hans Peter Heldt-Hansen** Some characteristics of extracellular proteases produced by members of the Chytridiales and the Spizellomycetales (Chytridiomycetes) 106
- M.S. Reddy, R.K. Hynes, and G. Lazarovits** Relationship between in vitro growth inhibition of pathogens and suppression of preemergence damping-off and postemergence root rot of white bean seedlings in the greenhouse by bacteria 113
- Namsou Kim and Su Il Kim** Characterization and primary specificity of an extracellular metalloproteinase from *Serratia marcescens* 120
- H.N. Williams, H. Quinby, and E. Romberg** Evaluation and use of a low nutrient medium and reduced incubation temperature to study bacterial contamination in the water supply of dental units 127
- R.A. Drijber and W.B. McGill** Sulfonolipid content of *Cytophaga* and *Flexibacter* species isolated from soil and cultured under different nutrient and temperature regimes 132

## NOTES

- Sandra M. Ruzal and Carmen Sanchez-Rivas** Physiological and genetic characterization of the osmotic stress response in *Bacillus subtilis* 140
- Donald W. Warburton, John K. McCormick, and Bruce Bowen** Survival and recovery of *Aeromonas hydrophila* in water: development of methodology for testing bottled water in Canada 145
- Giuseppe Firrao and Romano Locci** Identification of *Clavibacter michiganensis* subsp. *sepedonicus* using the polymerase chain reaction 148
- Robert S. Fulghum** Characterization and identification of *Pseudomonas* strain WRF 152
- W.L. Albritton, P.A. Noble, and K.D. Webster** Clarification of the structure of the ampicillin-resistance plasmid RSF0885 from *Haemophilus influenzae* HR-885 serotype *b* 154
- W.L. Albritton and L. Chui** Sequence analysis of two deletion mutants in the *hisC* gene of *Salmonella typhimurium* 158

## MARCH / MARS

## ARTICLES

- Gary B. Dunphy** Interaction of mutants of *Xenorhabdus nematophilus* (Enterobacteriaceae) with antibacterial systems of *Galleria mellonella* larvae (Insecta: Pyralidae) 161
- Laura A. Vanderberg and Jerome J. Perry** Dehalogenation by *Mycobacterium vaccae* JOB-5: role of the propane monooxygenase 169
- Peter J. Beatson and Kevin C. Marshall** A proposed helical mechanism for gliding motility in three gliding bacteria (order Cytophagales) 173
- Arden Aspedon and Kenneth W. Nickerson** The energy dependence of detergent resistance in *Enterobacter cloacae*: a likely requirement for ATP rather than a proton gradient or a membrane potential 184
- Matthias Bergbauer and Claudia Eggert** Degradability of chlorine-free bleaching effluent lignins by two fungi: effects on lignin subunit type and on polymer molecular weight 192
- Peter H. Graham, Kathryn J. Draeger, Mark L. Ferrey, Mark J. Conroy, Bruce E. Hammer, Esperanza Martinez, Sharon R. Aarons, and Carmen Quinto** Acid pH tolerance in strains of *Rhizobium* and *Bradyrhizobium*, and initial studies on the basis for acid tolerance of *Rhizobium tropici* UMR1899 198
- M.L.C. George, J.P.W. Young, and D. Borthakur** Genetic characterization of *Rhizobium* sp. strain TAL1145 that nodulates tree legumes 208
- Susanne Schultze-Lam and Terry J. Beveridge** Physicochemical characteristics of the mineral-forming S-layer from the cyanobacterium *Synechococcus* strain GL24 216
- E.O. Kalcheva, M.M. Faiziev, V.O. Shanskaya, and S.S. Maluta** Regulation of two aspartokinase isozymes in *Streptococcus bovis* 224

## NOTES

- Fumiaki Taguchi, Naoki Mizukami, Katsushige Hasegawa, and Tatsuo Saito-Taki** Microbial conversion of arabinose and xylose to hydrogen by a newly isolated *Clostridium* sp. No. 2 228
- Joseph G. Leahy, Joanne M. Jones-Meehan, and Rita R. Colwell** Transformation of *Acinetobacter calcoaceticus* RAG-1 by electroporation 233
- Douglas P. Bayley and Susan F. Koval** Membrane association and isolation of the S-layer protein of *Methanococcus marisnigri* 237

## APRIL / AVRIL

## ARTICLES

- Z. Tamanai-Shacoori, A. Jolivet-Gougeon, M. Pommepuy, M. Cormier, and R.R. Colwell** Detection of enterotoxigenic *Escherichia coli* in water by polymerase chain reaction amplification and hybridization 243
- S.Y. Newell and J.W. Fell** Parallel testing of media for measuring frequencies of occurrence for *Halophytophthora* spp. (Oomycota) from decomposing mangrove leaves 250
- Hart Spiller, William Stallings, Jr., Chingkuang Tu, and Muthukumaran Gunasekaran** Dependence of H<sup>+</sup> exchange and oxygen evolution on K<sup>+</sup> in the marine cyanobacterium *Synechococcus* sp. strain UTEX 2380 257
- Kevin C. Hazen and Pati M. Glee** Hydrophobic cell wall protein glycosylation by the pathogenic fungus *Candida albicans* 266
- R. Boopathy and C.F. Kulpa** Biotransformation of 2,4,6-trinitrotoluene (TNT) by a *Methanococcus* sp. (strain B) isolated from a lake sediment 273
- George W. Sundin and Carol L. Bender** Relative fitness in vitro and in planta of *Pseudomonas syringae* strains containing copper and streptomycin resistance plasmids 279
- France Daigle, Josée Harel, John M. Fairbrother, and Pierre Lebel** Expression and detection of *pap*-, *sfa*-, and *afa*-encoded fimbrial adhesin systems among uropathogenic *Escherichia coli* 286
- David A. Hart and Donald E. Woods** Urokinase enhances the growth of *Pseudomonas* spp. in vitro under nonshaking (oxygen limited) conditions 292
- T.A. McAllister, H.D. Bae, L.J. Yanke, K.-J. Cheng, and A. Muir** Effect of condensed tannins from birdsfoot trefoil on endoglucanase activity and the digestion of cellulose filter paper by ruminal fungi 298

## NOTES

- Endang Purwantini, Biswarup Mukhopadhyay, and Lacy Daniels** Characterization of F<sub>390</sub> synthetase activity in cell extracts of *Methanobacterium thermoautotrophicum* Marburg 306
- Herbert P. Schweizer** Coordinate derepression of alkaline phosphatase, and binding protein dependent transport systems for phosphate and sn-glycerol-3-phosphate by phosphate starvation in *Erwinia carotovora* subsp. *carotovora* 310
- M. Sajjad Mirza, Dittmar Hahn, Svetlana V. Dobritsa, and Antoon D.L. Akkermans** Phylogenetic studies on uncultured *Frankia* populations in nodules of *Datisca cannabina* 313
- Takezo Udou** Extracellular hemolytic activity in rapidly growing mycobacteria 318
- Georges Fouilleux, Cécile Revellin, and Gérard Catroux** Short-term recovery of *Bradyrhizobium japonicum* during an inoculation process using mineral microgranules 322
- János Varga, Ferenc Kevei, Csaba Vágvolgyi, Aldwin Vriesema, and James H. Croft** Double-stranded RNA mycoviruses in section *Nigri* of the *Aspergillus* genus 325

## MAY / MAI

## ARTICLES

- G.M. Wolfaardt, J.R. Lawrence, R.D. Robarts, and D.E. Caldwell** The role of interactions, sessile growth, and nutrient amendments on the degradative efficiency of a microbial consortium 331
- Beatriz E.C. Guth, Regina Giraldo, Tania A.T. Gomes, and Lilian R.M. Marques** Survey of cytotoxin production among *Escherichia coli* strains characterized as enteropathogenic (EPEC) by serotyping and presence of EPEC adherence factor (EAF) sequences 341
- Sarah M. Nour, Jean-Claude Cleyet-Marel, Douglas Beck, Aline Effosse, and Maria P. Fernandez** Genotypic and phenotypic diversity of *Rhizobium* isolated from chickpea (*Cicer arietinum* L.) 345
- Jennifer Martin-Kearley and John A. Gow** Numerical taxonomy of *Vibrionaceae* from Newfoundland coastal waters 355
- Jean-François Éthier, Serge Harpin, Christine Girard, Carole Beaulieu, Claude V. Déry, and Ryszard Brzezinski** Cloning of two xylanase genes from the newly isolated actinomycete *Actinomyces* sp. strain FC7 and characterization of the gene products 362
- Paule Dion, Raymond Charbonneau, and Chantal Thibault** Effect of ionizing dose rate on the radioresistance of some food pathogenic bacteria 369
- Richard A. Snyder, Richard D. Robarts, and Douglas E. Caldwell** [*methyl*-<sup>3</sup>H]Thymidine and [<sup>3</sup>H]leucine incorporation in *Vibrio* spp. grown in nutrient-limited continuous cultures 375
- Martin G. Klotz and Anne J. Anderson** The role of catalase isozymes in the culturability of the root colonizer *Pseudomonas putida* after exposure to hydrogen peroxide and antibiotics 382

## NOTES

- A. James Wall and Glenn W. Stratton** Effects of a chromated-copper-arsenate wood preservative on the bacterial degradation of pentachlorophenol 388
- A.F. Furtado, T.A. McAllister, K.-J. Cheng, and L.P. Milligan** Production of 2-aminobutyrate by *Megasphaera elsdenii* 393
- Doreen E. Culham, Katherine S. Emmerson, Bonnie Lasby, Daniel Mamelak, Brian A. Steer, Carlton L. Gyles, Merna Villarejo, and Janet M. Wood** Genes encoding osmoregulatory proline/glycine betaine transporters and the proline catabolic system are present and expressed in diverse clinical *Escherichia coli* isolates 397
- René De Mot, Istvan Nagy, Geert Schoofs, and Jos Vanderleyden** Sequence of a *Rhodococcus* gene cluster encoding the subunits of ethanolamine ammonia-lyase and an APC-like permease 403
- A.S. Gordon, L.D. Howell, and V. Harwood** Responses of diverse heterotrophic bacteria to elevated copper concentrations 408
- P.A. Gerin, M. Asther, U.B. Sleytr, and P.G. Rouxhet** Detection of rodlets in the outer wall region of conidiospores of *Phanerochaete chrysosporium* 412

## JUNE / JUIN

## REVIEW / SYNTHÈSE

- M.N. Davidova, N.B. Tarasova, F.K. Mukhitova, and I.U. Karpilova** Carbon monoxide in metabolism of anaerobic bacteria 417

## ARTICLES

- Gregory Bezanson, Rachel Fernandez, David Haldane, Susan Burbridge, and Thomas Marrie** Virulence of patient and water isolates of *Legionella pneumophila* in guinea pigs and mouse L929 cells varies with bacterial genotype 426
- William T. Stringfellow and Michael D. Aitken** Comparative physiology of phenanthrene degradation by two dissimilar pseudomonads isolated from a creosote-contaminated soil 432
- C.M. Futsaether and A. Johnsson** Using fura-2 to measure intracellular free calcium in *Propionibacterium acnes* 439
- Jennifer Martin-Kearley, John A. Gow, Marc Péloquin, and Charles W. Greer** Numerical analysis and the application of random amplified polymorphic DNA polymerase chain reaction to the differentiation of *Vibrio* strains from a seasonally cold ocean 446

<b>M.L. Ferrey, P.H. Graham, and M.P. Russelle</b>	Nodulation efficiency of <i>Bradyrhizobium japonicum</i> strains with genotypes of soybean varying in the ability to resist nodulation	456
<b>Valérie Vasseur, Thierry Barchietto, and Gilbert Bompeix</b>	Characterization of <i>N</i> -acetyl-D-glucosamine uptake in <i>Aphanocladium album</i>	461
<b>David C. Herman, Phillip M. Fedorak, Mike D. MacKinnon, and J.W. Costerton</b>	Biodegradation of naphthenic acids by microbial populations indigenous to oil sands tailings	467
<b>M. Shankar, D.I. Kurtböke, L.M.J. Gillespie-Sasse, C.Y. Rowland, and K. Sivasithamparam</b>	Possible roles of competition for thiamine, production of inhibitory compounds, and hyphal interactions in suppression of the take-all fungus by a sterile red fungus	478
<b>Hong Zhu, K.-J. Cheng, and Cecil W. Forsberg</b>	A truncated $\beta$ -xylosidase from the anaerobic fungus <i>Neocallimastix patriciarum</i> 27	484

## NOTES

<b>Martina Creaven, Richard J. FitzGerald, and Fergal O'Gara</b>	Transformation of <i>Gluconobacter oxydans</i> subsp. <i>suboxydans</i> by electroporation	491
<b>Robin K. Oshiro, Teresa Picone, and Betty H. Olson</b>	Modification of reagents in the EnviroAmp™ kit to increase recovery of <i>Legionella</i> organisms in water	495
<b>R. Quirantes, I. Martín, E. Valdivia, A. Gálvez, M. Martínez-Bueno, and M. Maqueda</b>	Bacteriocin plasmid pMB1 of <i>Enterococcus faecalis</i> : identification of the cell aggregation substance after induction by sex pheromone	500
<b>C. Madrid, C. Badenas, and A. Juárez</b>	Isolation and characterization of a Tn5-induced <i>tolQ</i> mutant of <i>Escherichia coli</i>	503
<b>M.-C. Baelden, A.-E. Bouckaert, D. Grégoire, M. van de Poele, and M. Coene</b>	Comparison of thermostable macromolecular antigens from leprosy-associated bacteria	508

## JULY / JUILLET

## REVIEW / SYNTHÈSE

<b>John G. Streeter</b>	Failure of inoculant rhizobia to overcome the dominance of indigenous strains for nodule formation	513
-------------------------	--	-----

## ARTICLES

<b>Artistotle Domnas, Shankha S. Biswas, and Patricia A. Gallagher</b>	Squalene metabolism in two species of <i>Lagenidium</i>	523
<b>Ronghua Yu and Anthony B. Schryvers</b>	Transferrin receptors on ruminant pathogens vary in their interaction with the C-lobe and N-lobe of ruminant transferrins	532
<b>Santokh Gill, Julie Belles-Isles, Gerry Brown, Serge Gagné, Claude Lemieux, Jean-Patrick Mercier, and Patrice Dion</b>	Identification of variability of ribosomal DNA spacer from <i>Pseudomonas</i> soil isolates	541
<b>R.K. Hynes, J. Hill, M.S. Reddy, and G. Lazarovits</b>	Phytoalexin production by wounded white bean ( <i>Phaseolus vulgaris</i> ) cotyledons and hypocotyls in response to inoculation with rhizobacteria	548
<b>J. Aislabie, N.K. Richards, and T.C. Lyttle</b>	Description of bacteria able to degrade isoquinoline in pure culture	555
<b>N.K. Richards, H.K. Mahanty, and J. Aislabie</b>	Construction of a DNA probe to detect isoquinoline-degrading bacteria	561
<b>Michael S. DuBow and Manon Lalumière</b>	The proximity of mini-Mu termini can affect the products of DNA transposition	567
<b>Qitu Wu and Roger Knowles</b>	Cellular regulation of nitrate uptake in denitrifying <i>Flexibacter canadensis</i>	576
<b>Jeffrey E. Tam, Carolyn H. Davis, and Priscilla B. Wyrick</b>	Expression of recombinant DNA introduced into <i>Chlamydia trachomatis</i> by electroporation	583

## NOTES

<b>Abiye H. Iyo and Cecil W. Forsberg</b>	Features of the cellodextrinase gene from <i>Fibrobacter succinogenes</i> S85	592
<b>C. Badenas, C. Madrid, and A. Juárez</b>	Excision and transposition of Tn5 upon insertion in the <i>hha</i> gene of <i>Escherichia coli</i>	597
<b>A.M. Abou-Zeid</b>	Purification and some properties of aspartate aminotransferase of <i>Amycolatopsis methanolica</i>	601

## AUGUST / AOÛT

## REVIEW / SYNTHÈSE

<b>Philippe Gilot and Marc Coene</b>	Thermostable macromolecular antigens from mycobacteria	605
--------------------------------------	--	-----

## ARTICLES

<b>János Varga, Ferenc Kevei, Aldwin Vriesema, Fons Debets, Zofia Kozakiewicz, and James H. Croft</b>	Mitochondrial DNA restriction fragment length polymorphisms in field isolates of the <i>Aspergillus niger</i> aggregate	612
<b>Rafael A. Garduño, Barry M. Phipps, and William W. Kay</b>	Physiological consequences of the S-layer of <i>Aeromonas salmonicida</i> in relation to growth, temperature, and outer membrane permeation	622
<b>J.I. Pounder and A.J. Anderson</b>	Catalase released from beneficial and plant-pathogenic pseudomonads by water and chloroform treatments	630
<b>Manchanahally B. Shivanna, Manchanahally S. Meera, and Mitsuro Hyakumachi</b>	Sterile fungi from zoysiagrass rhizosphere as plant growth promoters in spring wheat	637

<b>María M. Dobao, Manuel Martínez-Luque, Conrado Moreno-Vivián, and Francisco Castillo</b> Effect of carbon and nitrogen metabolism on nitrate reductase activity of <i>Rhodobacter capsulatus</i> E1F1	645
<b>Badria Kafala and A. Sasarman</b> Cloning and sequence analysis of the <i>hemB</i> gene of <i>Staphylococcus aureus</i>	651
<b>Nils-Kåre Birkeland</b> Cloning, molecular characterization, and expression of the genes encoding the lytic functions of lactococcal bacteriophage $\phi$ LC3: a dual lysis system of modular design	658
<b>Anders Sonesson, Erik Jantzen, Torill Tangen, and Ulrich Zähringer</b> Lipopolysaccharides of <i>Legionella erythra</i> and <i>Legionella oakridgensis</i>	666
<b>Mohamed Laakel, Ahmed Lebrihi, Saida Khaoua, François Schneider, Gérard Lefebvre, and Pierre Germain</b> Relationship between valine, fatty acids, and spiramycin biosynthesis in <i>Streptomyces ambofaciens</i>	672
<b>Ana T. Giraudo, Claudia G. Raspanti, Aldo Calzolari, and Rosa Nagel</b> Characterization of a Tn551-mutant of <i>Staphylococcus aureus</i> defective in the production of several exoproteins	677

## NOTES

<b>Martin P. Nadeau, Gary B. Dunphy, and Jacques L. Boisvert</b> Entomopathogenic fungi of the order Entomophthorales (Zygomycotina) in adult black fly populations (Diptera: Simuliidae) in Quebec	682
<b>Barbara Kłapcińska</b> Bonding of germanium and lead to <i>Pseudomonas putida</i> lipopolysaccharides	686
<b>Pascale Durand, Afeda Benyagoub, and Daniel Prieur</b> Numerical taxonomy of heterotrophic sulfur-oxidizing bacteria isolated from southwestern Pacific hydrothermal vents	690

## SEPTEMBER / SEPTEMBRE

## ARTICLES

<b>E. Sánchez, J. Teixidó, R. Guerrero, and R. Amils</b> Hypersensitivity of <i>Rhodobacter sphaeroides</i> ribosomes to protein synthesis inhibitors: structural and functional implications	699
<b>Geralyn Lopez-de-Victoria, Donald R. Fielder, Richard K. Zimmer-Faust, and Charles R. Lovell</b> Motility behavior of <i>Azospirillum</i> species in response to aromatic compounds	705
<b>Patrick Monfort and Bernard Baleux</b> Effects of environmental factors present in the St. Lawrence Estuary (Quebec, Canada) on experimental survival of <i>Salmonella salamae</i> as determined by flow cytometry	712
<b>Siminder Kaur and Prashant Mishra</b> Differential increase in cytoplasmic pH at bud and germ tube formation in <i>Candida albicans</i> : studies of a nongerminative variant	720
<b>A. Lomascolo, E. Dubreucq, V. Perrier, and P. Galzy</b> Study of lipids in <i>Lipomyces</i> and <i>Waltomyces</i>	724
<b>Jiří Hašek and Eva Streiblová</b> Flunarizine affects F-actin pattern in <i>Mucor rouxii</i> germlings	730
<b>Jane E. Smith, Donaraye McKay, and Randy Molina</b> Survival of mycorrhizal fungal isolates stored in sterile water at two temperatures and retrieved on solid and liquid nutrient media	736
<b>Janique Bergeron, Darakhshan Ahmad, Diane Barriault, Angèle Larose, Michel Sylvestre, and Justin Powlowski</b> Identification and mapping of the gene translation products involved in the first steps of the <i>Comamonas testosteroni</i> B-356 biphenyl/chlorobiphenyl biodegradation pathway	743
<b>Mohamed S. El-Abyad, Mostafa A. El-Sayed, Abdel-Reheem El-Shanshoury, and Mervat Farid</b> Optimization of culture conditions for indole-3-pyruvic acid production by <i>Streptomyces griseoflavus</i>	754
<b>N. Mazure and N. Truffaut</b> Degradation of morpholine by <i>Mycobacterium aurum</i> MO1	761
<b>Dwayne D. Hegedus and George G. Khachatourians</b> Isolation and characterization of conditional lethal mutants of <i>Beauveria bassiana</i>	766

## NOTES

<b>Wade H. Bingle and John Smit</b> Alkaline phosphatase and a cellulase reporter protein are not exported from the cytoplasm when fused to large N-terminal portions of the <i>Caulobacter crescentus</i> surface (S)-layer protein	777
<b>Helen A. Grasseschi and Michael F. Minnick</b> Transformation of <i>Bartonella bacilliformis</i> by electroporation	782
<b>Ramaraj Boopathy, John Manning, Carlo Montemagno, and Kris Rimkus</b> Metabolism of trinitrobenzene by a <i>Pseudomonas</i> consortium	787
<b>Jianchi Chen and C.J. Chang</b> The osmotic lysis of spiroplasma cells and its use in enzyme studies	791
<b>Mark L. Ferrey, William C. Koskinen, Robert A. Blanchette, and Todd A. Burnes</b> Mineralization of alachlor by lignin-degrading fungi	795
<b>A.K. Dhar, R.P. Singh, and A. Boucher</b> Molecular cloning and sequencing of the capsid and the nuclear inclusion protein genes of a North American PVY <sup>N</sup> isolate	798

## OCTOBER / OCTOBRE

## ARTICLES

<b>Pierre Payment, Eduardo Franco, and G. Shay Fout</b> Incidence of Norwalk virus infections during a prospective epidemiological study of drinking water related gastrointestinal illness	805
---	-----



<b>P.J. Ann and W.H. Ko</b> An asexual variant of <i>Phytophthora insolita</i>	810
<b>C.W. Chan and Isamu Suzuki</b> Thiosulfate oxidation by sulfur-grown <i>Thiobacillus thiooxidans</i> cells, cell-free extracts, and thiosulfate-oxidizing enzyme	816
<b>Silvana Povolo, Riccardo Tombolina, Antonella Morea, Alistair J. Anderson, Sergio Casella, and Marco P. Nuti</b> Isolation and characterization of mutants of <i>Rhizobium meliloti</i> unable to synthesize poly- $\beta$ -hydroxybutyrate	823
<b>Josée Coallier, Michèle Prévost, Annie Rompré, and Daniel Duchesne</b> The optimization and application of two direct viable count methods for bacteria in distributed drinking water	830
<b>G.D. Sprott, C.J. Dicaire, and G.B. Patel</b> The ether lipids of <i>Methanosarcina mazei</i> and other <i>Methanosarcina</i> species, compared by fast atom bombardment mass spectrometry	837
<b>Peter Kämpfer, Klaus Blaszczk, and Georg Auling</b> Characterization of <i>Aeromonas</i> genomic species by using quinone, polyamine, and fatty acid patterns	844
<b>Eduardo V. Soares, José A. Teixeira, and Manuel Mota</b> Effect of cultural and nutritional conditions on the control of flocculation expression in <i>Saccharomyces cerevisiae</i>	851
<b>Patricia A. Gallagher, Steven A. Warner, and Aristotle J. Domnas</b> Presqualene metabolism in two species of <i>Lagenidium</i>	858
<b>Frank C. Gibson III, Arthur O. Tzianabos, and Frank G. Rodgers</b> Adherence of <i>Legionella pneumophila</i> to U-937 cells, guinea-pig alveolar macrophages, and MRC-5 cells by a novel, complement-independent binding mechanism	865
NOTES	
<b>M. Fenton and B.D.W. Jarvis</b> Expression of the symbiotic plasmid from <i>Rhizobium leguminosarum</i> biovar <i>trifolii</i> in <i>Sphingobacterium multivorum</i>	873
<b>Wally H. Müller, Adriaan C. van Aelst, Theo P. van der Krift, and Teun Boekhout</b> Scanning electron microscopy of the septal pore cap of the basidiomycete <i>Schizophyllum commune</i>	879
<b>Timothy M. Straub, Ian L. Pepper, and Charles P. Gerba</b> Detection of naturally occurring enteroviruses and hepatitis A virus in undigested and anaerobically digested sludge using the polymerase chain reaction	884
<b>Jean Mukherjee, Matthew D. Scharff, and Arturo Casadevall</b> <i>Cryptococcus neoformans</i> infection can elicit protective antibodies in mice	888
<b>Dennis P. Jackson, Douglas A. Gray, Vincent L. Morris, and Diane A. Cuppels</b> Erratum: Identification of a DNA region required for growth of <i>Pseudomonas syringae</i> pv. <i>tomato</i> on tomato plants	893

## NOVEMBER / NOVEMBRE

## LETTERS / FORUM

<b>Claudia Thio</b> Correct use of the EnviroAmp™ PCR <i>Legionella</i> kit	895
<b>Betty H. Olson</b> Correct use of the EnviroAmp™ PCR <i>Legionella</i> kit	895

## ARTICLES

<b>A.L. Twerdochlib, F.O. Pedrosa, S. Funayama, and L.U. Rigo</b> L-Rhamnose metabolism in <i>Pichia stipitis</i> and <i>Debaryomyces polymorphus</i>	896
<b>M.M. Sexton, A.L. Jones, W. Chaowagul, and D.E. Woods</b> Purification and characterization of a protease from <i>Pseudomonas pseudomallei</i>	903
<b>Bernard R. Glick, Christian B. Jacobson, Melinda M.K. Schwarze, and J.J. Pasternak</b> 1-Aminocyclopropane-1-carboxylic acid deaminase mutants of the plant growth promoting rhizobacterium <i>Pseudomonas putida</i> GR12-2 do not stimulate canola root elongation	911
<b>Qitu Wu, Roger Knowles, and Donald F. Niven</b> O <sub>2</sub> regulation of denitrification in <i>Flexibacter canadensis</i>	916
<b>Michael L. Dyll-Smith and W. Ford Doolittle</b> Construction of composite transposons for halophilic Archaea	922
<b>Yuko Ohara-Nemoto, Minoru Sasaki, Masaru Kaneko, Takayuki Nemoto, and Minoru Ota</b> Cysteine protease activity of streptococcal pyrogenic exotoxin B	930
<b>Akihiko Tsuneda and Greg Thorn</b> Interactions between <i>Lentinula edodes</i> and pseudomonads	937
<b>M. Zheng and S.T. Kellogg</b> Analysis of bacterial populations in a basalt aquifer	944
<b>Anita J. Telang, Gerrit Voordouw, Sara Ebert, Neili Sifelddeen, Julia M. Foght, Phillip M. Fedorak, and D.W.S. Westlake</b> Characterization of the diversity of sulfate-reducing bacteria in soil and mining waste water environments by nucleic acid hybridization techniques	955

## NOTES

<b>Raúl Noguez, Soledad Moreno, Josefina Gúzman, and Guadalupe Espín</b> The effect of the nitrogen source and <i>ntrC</i> on the adenylation of glutamine synthetase I in <i>Rhizobium etli</i>	965
<b>K.S. Mohan and Satish K. Walia</b> Detection of soluble methane monooxygenase producing <i>Methylosinus trichosporium</i> OB3b by polymerase chain reaction	969
<b>P. Blanco, C. Sieiro, A. Diaz, and T.G. Villa</b> Production and partial characterization of an endopolygalacturonase from <i>Saccharomyces cerevisiae</i>	974

<b>Nancy W. Chang and Michael J. Wade</b>	The transfer of <i>Wolbachia pipientis</i> and reproductive incompatibility between infected and uninfected strains of the flour beetle, <i>Tribolium confusum</i> , by microinjection	978
<b>J.B. Sotsky, C.W. Greer, and R.M. Atlas</b>	Frequency of genes in aromatic and aliphatic hydrocarbon biodegradation pathways within bacterial populations from Alaskan sediments	981

## DECEMBER / DÉCEMBRE

## ARTICLES

<b>Donald W. Warburton, Bruce Bowen, and Anne Konkle</b>	The survival and recovery of <i>Pseudomonas aeruginosa</i> and its effect upon salmonellae in water: methodology to test bottled water in Canada	987
<b>Outi M. Zacheus and Pertti J. Martikainen</b>	Occurrence of legionellae in hot water distribution systems of Finnish apartment buildings	993
<b>N. Lakshmi Rani and D. Lalithakumari</b>	Degradation of methyl parathion by <i>Pseudomonas putida</i>	1000
<b>J.L.W. Rademaker and J.D. Janse</b>	Detection and identification of <i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i> and <i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i> by nonradioactive hybridization, polymerase chain reaction, and restriction enzyme analysis	1007
<b>Christian B. Jacobson, J.J. Pasternak, and Bernard R. Glick</b>	Partial purification and characterization of l-aminocyclopropane-1-carboxylate deaminase from the plant growth promoting rhizobacterium <i>Pseudomonas putida</i> GR12-2	1019
<b>Galina G. Chestukhina, Lyubov I. Kostina, Igor A. Zalunin, Lyudmila P. Revina, Alla L. Mikhailova, and Valentin M. Stepanov</b>	Production of multiple $\delta$ -endotoxins by <i>Bacillus thuringiensis</i> : $\delta$ -endotoxins produced by strains of the subspecies <i>galleriae</i> and <i>wuhanensis</i>	1026
<b>Tommy C. Sewall</b>	Cellular effects of misscheduled <i>brlA</i> , <i>abaA</i> , and <i>wetA</i> expression in <i>Aspergillus nidulans</i>	1035
<b>Gordana Djordjevic, Bojana Bojovic, Ana Banina, and Ljubisa Topisirovic</b>	Cloning of promoter-like sequences from <i>Lactobacillus paracasei</i> subsp. <i>paracasei</i> CG11 and their expression in <i>Escherichia coli</i> , <i>Lactococcus lactis</i> , and <i>Lactobacillus reuteri</i>	1043
<b>Maria Elisabetta Guerzoni, Rosalba Lanciotti, Milena Sinigaglia, Monica Anese, and Carlo Raffaele Lerici</b>	Influence of some selected ions on system water activity and on ethanol vapour pressure and its inhibitory action on <i>Saccharomyces cerevisiae</i>	1051
<b>Nancy J. Brown-Peterson and Marvin L. Salin</b>	Salt stress in a halophilic bacterium: alterations in oxidative metabolism and oxy-intermediate scavenging systems	1057

## NOTES

<b>Brian Nowak-Thompson, Steven J. Gould, Jennifer Kraus, and Joyce E. Loper</b>	Production of 2,4-diacetylphloroglucinol by the biocontrol agent <i>Pseudomonas fluorescens</i> Pf-5	1064
<b>Roberta R. Fulthorpe and D. Grant Allen</b>	Evaluation of Biolog MT plates for aromatic and chloroaromatic substrate utilization tests	1067
<b>Wolfgang Zimmer, Barbara Hundeshagen, and Edith Niederau</b>	Demonstration of the indolepyruvate decarboxylase gene homologue in different auxin-producing species of the <i>Enterobacteriaceae</i>	1072
Note of appreciation / Note de reconnaissance		iv
Author index for Volume 40 / Index des auteurs pour le volume 40		AI-1
Subject index for Volume 40 / Index des matières pour le volume 40		SI-1
Contents for Volume 40 / Sommaire pour le volume 40		C-1